



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live.*

Frank O'Bannon  
Governor

Lori F. Kaplan  
Commissioner

June 24, 2003

100 North Senate Avenue  
P. O. Box 6015  
Indianapolis, Indiana 46206-6015  
(317) 232-8603  
(800) 451-6027  
www.IN.gov/idem

TO: Interested Parties / Applicant  
RE: International Fuel Systems #081-17192-00041  
FROM: Paul Dubenetzky  
Chief, Permits Branch  
Office of Air Quality

## Notice of Decision: Registration

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 4-21.5-3-4 (d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, ISTA Building, 150 W. Market Street, Suite 618, Indianapolis, IN 46204, **within (18) eighteen days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) the date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (b) the interest of the person making the request;
- (c) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for consideration at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosure

REGIS.wpd 8/21/02



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July 24, 2003

Jeff Copeland  
International Fuel Systems  
2902 Enterprise Drive  
Anderson, Indiana 46013

Re: Revised Registered Construction and Operation Status,  
**R 081-17192-00041**

Dear Mr. Copeland:

The application from International Fuel Systems, received on August 22, 2002, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.1 and 326 IAC 2-5.5, it has been determined that the following operation, located at 980 Hurricane Road, Franklin, Indiana 46131, is classified as registered:

- (a) Nineteen (19) natural gas-fired unit heaters, using liquid propane gas as a backup fuel, maximum heat input capacity: 0.13 million British thermal units per hour, each.
- (b) Four (4) cold cleaner parts washers, constructed in 1999, using less than five percent (5%) halogenated solvents by weight, capacity: 1.7 gallons per day, total.
- (c) Welding operations, including one (1) metal inert gas (MIG) welding station with a maximum wire consumption rate of 0.01042 pounds per hour, one (1) tungsten inert gas (TIG) welding station with a maximum wire consumption rate of 0.03125 pounds per hour, and one (1) oxyacetylene welding station, with a maximum wire consumption rate of 0.00087 pounds per hour.
- (d) One (1) natural gas-fired pyrolysis cleaning furnace, identified as bake-off oven #1, with a maximum heat input capacity of 0.95 million British thermal units per hour, utilizing one (1) direct flame afterburner as an integral part of the furnace, rated at 0.75 million British thermal units per hour, and exhausting to stack E-38, capacity: 19 pounds of engine parts per hour.
- (e) One (1) natural gas-fired burn-off oven, identified as E39, with a maximum heat input capacity of 0.1 million British thermal units per hour, utilizing one (1) direct flame afterburner as an integral part of the oven, rated at 0.1 million British thermal units per hour, all exhausting through stack E-39, capacity: 76 pounds of engine parts per hour.
- (f) One (1) enclosed shotblasting process, identified as Glass Bead Blaster, consisting of two (2) hand blasters and two (2) auto blasters, equipped with a dust collector (B-1) and exhausting inside the building, capacity: 101.8 pounds of glass beads per hour and 94 pounds of parts per hour, total.

- (g) One (1) enclosed shotblaster, identified as Steel Blaster, equipped with a dust collector (B-2) and exhausting inside the building, capacity: 800 pounds of steel shot per hour and 242 pounds of parts per hour.
- (h) One (1) dyno diesel engine test stand, exhausting to stack D-1, capacity: 4.60 gallons per hour.
- (i) Two (2) cold cleaner parts washers, capacity: 1.7 gallons of Safety Kleen solvent per day, total.

The following conditions shall be applicable:

1. Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following:
  - (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
  - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.
2. Any change or modification which may increase the potential to emit a combination of HAPs, PM, PM<sub>10</sub>, VOC, SO<sub>2</sub>, or NO<sub>x</sub> to twenty five (25) tons per year, a single HAP to ten (10) tons per year, or CO to one hundred (100) tons per year from this source shall require approval from IDEM, OAQ prior to making the change.
3. Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of the six (6) cold cleaner parts washers without remote solvent reservoirs shall:
  - (a) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (1) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF));
    - (2) The solvent is agitated; or
    - (3) The solvent is heated.
  - (b) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
  - (c) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

- (d) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (e) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):
  - (1) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
  - (2) A water cover when solvent is used is insoluble in, and heavier than, water.
  - (3) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- 4. Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of the six (6) cold cleaner parts washers, shall:
  - (a) Close the cover whenever articles are not being handled in the degreaser.
  - (b) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (c) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.
- 5. The owner or operator of the six (6) cold cleaner parts washers shall also comply with 326 IAC 8-3-2. Compliance with 326 IAC 8-3-5 shall also ensure compliance with 326 IAC 8-3-2.
- 6. Pursuant to 326 IAC 6-3-2(e)(1) (Particulate emission limitations, work practices, and control technologies), the particulate matter (PM) from the one (1) enclosed shotblasting process, identified as Glass Bead Blaster, shall be limited to 0.864 pounds per hour, when operating at a process weight rate of 195.8 pounds per hour.
- 7. Pursuant to 326 IAC 6-3-2(e)(1) (Particulate emission limitations, work practices, and control technologies), the particulate matter (PM) from the one (1) enclosed shotblaster, identified as Steel Blaster, shall be limited to 2.65 pounds per hour, when operating at a process weight rate of 1,042 pounds per hour.

The limitations in Conditions 6 and 7 are based on the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

- 8. In order to comply with Condition 6, the dust collector (B-1) for particulate control shall be in operation and control emissions from the one (1) enclosed shotblasting process, identified

as Glass Bead Blaster, at all times that the one (1) enclosed shotblasting process, identified as Glass Bead Blaster, is in operation.

9. In order to comply with Condition 7, the dust collector (B-2) for particulate control shall be in operation and control emissions from the one (1) enclosed shotblaster, identified as Steel Blaster, at all times that the one (1) enclosed shotblaster, identified as Steel Blaster, is in operation.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

**Compliance Branch  
Office of Air Quality  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, IN 46206-6015**

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original signed by

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

CJF/MES

cc: File - Johnson County  
Johnson County Health Department  
Air Compliance - Vaughn Ison  
Permit Administration  
Air Programs Section- Michele Boner  
Compliance Branch - Karen Nowak

**Indiana Department of Environmental Management  
Office of Air Quality**

**Technical Support Document (TSD) for a  
Revised Registration**

**Source Background and Description**

<b>Source Name:</b>	<b>International Fuel Systems</b>
<b>Source Location:</b>	<b>980 Hurricane Road, Franklin, Indiana 46131</b>
<b>County:</b>	<b>Johnson</b>
<b>SIC Code:</b>	<b>3519</b>
<b>Operation Permit No.:</b>	<b>R 081-15817-00041</b>
<b>Operation Permit Issuance Date:</b>	<b>September 4, 2002</b>
<b>Minor Permit Revision No.:</b>	<b>MPR 081-17192-00041</b>
<b>Permit Reviewer:</b>	<b>Craig J. Friederich</b>

The Office of Air Quality (OAQ) has reviewed a revision application from International Fuel Systems relating to the construction and operation of the following emission units and pollution control devices:

- (a) One (1) dyno diesel engine test stand, exhausting to stack D-1, capacity: 4.60 gallons per hour.
- (b) Two (2) cold cleaner parts washers, capacity: 1.7 gallons of Safety Kleen solvent per day, total.

**History**

On April 24, 2003, International Fuel Systems submitted an application to the OAQ requesting to add a dyno diesel engine test stand and two (2) additional cold cleaner parts washers to their existing plant. International Fuel Systems was issued a Registration on September 4, 2002.

**Enforcement Issue**

There are no enforcement actions pending.

**Stack Summary**

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
D-1	dyno diesel engine test cell	17.0	0.333	50.0	100

**Recommendation**

The staff recommends to the Commissioner that the Revised Registration be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on April 24, 2003.

### Emission Calculations

See pages 1 and 2 of 2 of Appendix A of this document for detailed emissions calculations.

### Potential To Emit of Revision

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA.”

This table reflects the PTE before controls for this revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	0.856
PM <sub>10</sub>	0.856
SO <sub>2</sub>	0.800
VOC	3.11
CO	2.62
NO <sub>x</sub>	12.2

  

HAPs	Potential To Emit (tons/year)
combined HAPs	0.011
TOTAL	0.011

### Justification for Revision

The Registration is being revised through a Registration Minor Permit Revision request. This revision is being performed pursuant to 326 IAC 2-5.5-6(h).

### County Attainment Status

The source is located in Johnson County.

Pollutant	Status
PM <sub>10</sub>	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Johnson County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) Johnson County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) Fugitive Emissions

Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

### Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Before Revision Emissions (tons/year)	After Revision Emissions (tons/year)
PM	20.0	20.856
PM <sub>10</sub>	20.1	20.956
SO <sub>2</sub>	0.532	1.332
VOC	2.85	5.96
CO	3.68	6.30
NO <sub>x</sub>	3.12	15.32

This existing source, after this revision, has the potential to emit less than Minor Source Operating Permit (MSOP) thresholds. Therefore, this source shall remain as a Registered source.

### **Federal Rule Applicability**

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) applicable to this proposed revision.
- (b) The two (2) cold cleaner parts washers are not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), Part 63, Subpart T because the cold cleaners do not use halogenated solvents.

### **State Rule Applicability - Individual Facilities**

#### **326 IAC 8-3 (Organic Solvent Degreasing Operations)**

The two (2) cold cleaner parts washers, are all cold cleaner degreasers without remote solvent reservoirs. Therefore, the requirements of 326 IAC 8-3-2, Organic Solvent Degreasing Operations: Cold Cleaner Operation, and 326 IAC 8-3-5, Organic Solvent Degreasing Operations: Cold Cleaner Degreaser Operation and Control, are applicable. Compliance with 326 IAC 8-3-5 will satisfy the requirements of 326 IAC 8-3-2.

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of the cold cleaner degreasers shall ensure that the following requirements are met:
  - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF));
    - (B) The solvent is agitated; or
    - (C) The solvent is heated.
  - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
  - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
  - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
  - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the

solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):

- (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
  - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
  - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of the cold cleaning degreasers shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

### Proposed Changes

The Registration letter language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language appears in bold):

The application from International Fuel Systems, received on August 22, 2002, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.1 and 326 IAC 2-5.5, it has been determined that the following operation, located at 980 Hurricane Road, Franklin, Indiana 46131, is classified as registered:

- (h) **One (1) dyno diesel engine test stand, exhausting to stack D-1, capacity: 4.60 gallons per hour.**
- (i) **Two (2) cold cleaner parts washers, capacity: 1.7 gallons of Safety Kleen solvent per day, total.**
- (3) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of the ~~four (4)~~ **six (6)** cold cleaner parts washers without remote solvent reservoirs shall:
  - (a) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (1) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF));
    - (2) The solvent is agitated; or

- (3) The solvent is heated.
- (b) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
- (c) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
- (d) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (e) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):
  - (1) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
  - (2) A water cover when solvent is used is insoluble in, and heavier than, water.
  - (3) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (4) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of the ~~four (4)~~ **six (6)** cold cleaner parts washers, shall:
  - (a) Close the cover whenever articles are not being handled in the degreaser.
  - (b) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (c) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.
- (5) The owner or operator of the ~~four (4)~~ **six (6)** cold cleaner parts washers shall also comply with 326 IAC 8-3-2. Compliance with 326 IAC 8-3-5 shall also ensure compliance with 326 IAC 8-3-2.

## Conclusion

The construction of this proposed revision shall be subject to the conditions of the attached proposed Revised Registration No. **081-17192-00041**.

**Appendix A: Emission Calculations  
Dynamometers**

Page 1 of 2 TSD App A

**Company Name: International Fuel Systems  
Address City IN Zip: 980 Hurricane Road, Franklin, Indiana 46131  
MPR: 081-15817  
Plt ID: 081-00041  
Reviewer: Craig J. Friederich  
Date: April 24, 2003**

**Dyno Diesel Engine Test Stand**

**Diesel**  
Maximum Fuel Usage  
gallons/yr

40296

Emission Factor in lb/gal	Pollutant						Lead 0.00E+00
	PM 4.25E-02	PM10 4.25E-02	SO2 3.97E-02	NOx 6.04E-01	VOC 4.93E-02	CO 1.30E-01	
Potential Emission in tons/yr	0.86	0.86	0.800	12.2	0.99	2.62	0.000

**Diesel**

Emission factors are from FIRES 6.22 SCC2-04-004-02

**Diesel fuel**

HAP	Emission Factor (lb/MMBtu)	Potential Throughput (MMBtu/hr)	Potential Emissions (lb/hr)	Potential Emissions (tons/yr)
Benzene	0.000933	0.644	0.0006	0.0026
Toluene	0.000409	0.644	0.0003	0.0012
Xylenes	0.000285	0.644	0.0002	0.0008
Propylene	0.000258	0.644	0.0002	0.0007
1,3-Butadiene	0.0000391	0.644	0.0000	0.0001
Formaldehyde	0.00118	0.644	0.0008	0.0033
Acetaldehyde	0.000767	0.644	0.0005	0.0022
Acrolein	0.0000925	0.644	0.0001	0.0003
Naphthalene	0.0000848	0.644	0.0001	0.0002
<b>Total:</b>				0.011

HAP Emission Factors are from AP 42 Table 3.3-2, since there is no HAP information in FIRES for test cells

**Appendix A: Emissions Calculations**  
**Degreasing**

Page 2 of 2 TSD App A

**Company Name:** International Fuel Systems  
**Address City IN Zip:** 980 Hurricane Road, Franklin, Indiana 46131  
**MPR:** 081-15817  
**Plt ID:** 081-00041  
**Reviewer:** Craig J. Friederich  
**Date:** April 24, 2003

Material	Maximum Consumption (gallons/day)	Material Density (lbs/gal)	Maximum Consumption (lbs/day)	Weight % VOC	VOC Emissions (tons/yr)
<b>Degreasing (W-1, W-2)</b>					
Safety Kleen Solvent	1.700	6.840	11.628	100%	2.12

Total State Potential Emissions

<b>TOTALS:</b>	<b>2.12</b>
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**METHODOLOGY**

VOCs emission rate (tons/yr) = Material Usage (lbs/day) \* Weight % VOC 365 day/yr \* 1 ton/2000 lbs